

**Amendments to the Claims**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims**

1. (currently amended) A sensor for sensing an analyte comprising:
  - an enclosure having an input and an output, the enclosure including a permeable wall;
  - a first light source having a first wavelength at or near where the analyte absorbs maximally, the first light source adjacent a first end of the enclosure;
  - a second light source having a second wavelength that the analyte does not absorb maximally, the second light source adjacent the first end of the enclosure;
  - a light detector adjacent a second end of the enclosure; and
  - wherein the enclosure is adapted to contain a first fluid.
2. (canceled)
3. (previously presented) The sensor of claim 1, wherein the permeable wall can permit entry of a second fluid into the enclosure.
4. (original) The sensor of claim 3, wherein:
  - the first fluid is a reagent; and
  - the second fluid is an analyte.
5. (original) The sensor of claim 3, further comprising a processor connected to the light detector.

6. (original) The sensor of claim 5, further comprising an indicator connected to the processor.

7. (original) The sensor of claim 6, further comprising a container connected to the input of the enclosure.

8. (original) The sensor of claim 7, further comprising a valve connected to the output of the enclosure.

9. (original) The sensor of claim 8, further comprising a second container connected to the output of the enclosure.

10-37. (canceled)

38. (currently amended) A sensor for sensing an analyte comprising:

a tubular permeable membrane enclosure having an input and an output;

a first light source having a first wavelength, the first light source proximate to a first end of the enclosure, wherein the first wavelength is absorbed by the analyte;

a second light source having a second wavelength, the second light source proximate to the enclosure, wherein the second wavelength is a reference wavelength;

a light detector proximate to a second end of the enclosure; and  
wherein the enclosure is capable of containing a fluid.

39. (canceled)

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40. (previously presented) The sensor of claim 38, wherein the membrane can permit entry of analyte into the enclosure.

41. (original) The sensor of claim 40, wherein the membrane can permit entry of reagent into the enclosure.

42. (original) The sensor of claim 41, further comprising a processor connected to the light detector.

43. (original) The sensor of claim 42, further comprising an indicator connected to the processor.

44. (original) The sensor of claim 43, further comprising a container connected to the input of the enclosure.

45. (original) The sensor of claim 44, further comprising a valve connected to the output of the enclosure.

46. (original) The sensor of claim 45, further comprising a second container connected to the output of the enclosure.

47-48. (canceled)

49. (previously presented) The sensor of claim 38, further comprising a flow sensor in the enclosure.

50. (currently amended) The sensor of claim 38, wherein each of the first and second light sources is a laser type of light source.

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51. (new) The sensor of claim 1, further comprising a controller configured to pulse the first and second light sources.
52. (new) The sensor of claim 38, further comprising a controller configured to pulse the first and second light sources.